# School Nurse Asthma Project

**Developed by** 

Arizona Asthma Coalition Arizona Department of Health

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#### Dear Colleague:

The Arizona Asthma Coalition (AAC) presents your school district with the School Nurse Asthma Project (SNAP) Kit. We developed the kits with your ideas along with funding from the Arizona Department of Health Services. Current funding will only allow SNAP distribution to each school district at this time. However, our goal is to give every school a SNAP kit in the future.

You'll find that it's a SNAP to use this kit! Critical information is at your fingertips. You'll find a pediatric best practice guide created by the American Academy of Allergy Asthma and Immunology and endorsed by national organizations committed to improving asthma outcomes. The manual explains the epidemiology of asthma, its pathogenesis, assessment, diagnosis, treatment, education and monitoring of people with asthma. Knowledge of these elements is critical to the guidance school nurses provide to students with asthma. A recent national survey revealed that most people with asthma regularly underestimate the severity of their condition and overestimate how well they control their asthma.

The kit also includes helpful tips for discussing asthma control with the child's parents or doctor. Duplicate the handouts and distribute them freely to reinforce asthma education facts. Encourage open communication between the doctor and family to ensure optimum asthma control and the child's readiness to learn. Collaborate with the child's doctor using information in the section addressing this relationship. Include a completed action plan in every asthmatic child's file. Other useful resources include videos, demonstration equipment, A.C.T. for asthma - an emergency guide plus community resources. Continuing education units are available through the Arizona State Board of Nursing.

We encourage your opinion to help us make this reference source more useful in your practice. Please contact us at the telephone number listed below or visit us on our website at **www.azasthma.org** where portions of the kit can download through links to other sites. Please feel free to share with us your experiences using SNAP or enlighten us about additional needs and areas for clarification. School nurses are important partners in this endeavor and together we can raise awareness that:

Asthma Can Be Controlled. Expect Nothing Less.

Sincerely,

Bill Morgan, MD Chairperson, AAC

# **Acknowledgements**

- This manual was made possible by a grant from the Arizona Department of Health to the Arizona Asthma Coalition.
- Organizations donating materials for this update and educational kit include:
  - a. American Lung Association
  - b. Arizona Asthma Coalition
  - c. Dey Pharmaceuticals
  - d. ITG Schering
  - e. Mothers of Asthmatics
- Organizations that provided discounts included:
  - a. AAAAI (manual and video)
  - b. American Lung Association (pamphlets)
  - c. Arizona State University College of Nursing, Continuing and Extended Education Program (Contact Hours)
  - d. Asthma and Allergy Foundation of America (videos)
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  - f. Mothers of Asthmatics (videos and handouts)
  - g. Dennis Korty (printing)
  - h. Graphic Statements- Susie DePinto (printing)

# Contributors to Development of Manual

- The content and design of manual was developed by the consultant- Evelyn Cesarotti Ph.D., FNP with assistance from the committee which included the following Arizona Asthma Coalition Members and others:
  - Carrie Booe
  - Susanne Cook
  - Marie Fenski & Edward Haskins
  - Debbie Holloway
  - Judy Nance
  - Roberta O'Neil
  - Polly Turpin
  - The pilot testing of the manual for contact hours was done by school nurses or asthma specialists and included:
    - Susanne Cook, Jeanne Cozine, Carol Davis, Christy Giroux, Nancy Groh, Laurel Kruger, Sarah Raubenolt, Holly Shiel, Danielle Sipe, Mary Weaverling-all from Tucson Arizona.

## Introduction

- A coalition committee of asthma educators, practitioners, school nurses and parents of children with asthma reviewed all current information available on asthma.
- Pediatric Asthma:Promoting Best Practices by The American Academy of Allergy Asthma & Immunology, Inc (AAAAI) was selected as the most current, comprehensive and applicable education resource for school nurses.
- A survey sent to Arizona school nurses indicated that in addition to updating their own knowledge, school nurses needed educational materials to use with children, parents, and school personnel. Therefore we are presenting each school district with the SNAP kit.



- To provide an update of best practices in management of asthma in school children.
- To provide educational materials for use by the school nurse
- To provide linkages to community resources for school nurses.

# **Self Instructional Unit**

# **EDUCATIONAL Program** for School Nurses Index

- Instructions for Using SNAP Educational Update
- Educational Program and Objectives
  - Lesson 1 & 2
    - Introduction
      - → Define what asthma is and why it is important to school health providers.
    - Epidemiology
      - → Describe the characteristics of children with asthma.
      - → Identify the goals or expected outcomes of asthma care.
    - Pathogenesis of Asthma in Children
      - → Review the inflammation response in childhood asthma.
    - Natural History of Asthma
      - → Identify factors that precipitate asthma attacks.
  - Lesson 3
    - Diagnosis
      - → Describe how asthma is diagnosed.
      - → Document the essential elements of the child asthma history.
      - → Select and compare the objective measurement used for diagnosis of asthma versus monitoring of asthma.
  - Lesson 4 & 5
    - Managing the Child with Asthma
      - → Discuss the components of successful asthma management.
    - Assessment and Monitoring
      - → Assess important components of PEF monitoring.
      - → List five questions that are important to ask about medications for the asthma history.



- Controlling Factors Contributing to Severity
  - → Identify the major indoor triggers for asthma.
  - List other factors that contribute to the severity of asthma.

- Pharmacologic Therapy Part 1
- Pharmacologic Therapy Part 2
  - → Examine the difference between long-term and quickacting medications.
  - → List the goals of therapy.
  - → Describe how asthma symptoms can be controlled for students participating in sports and physical activities.

#### Lesson 8

- Patient Education
  - → Distinguish the important components of patient teaching.
  - → Describe why working with teenagers is challenging.

#### Lesson 9

- Asthma and the School Child
  - → Identify the essential components of the school asthma management plan.
  - → Determine when children should be referred using Rules of Two<sup>TM</sup>.

#### Lesson 10

- Barriers to Care and Recommendations for Policy
  - → Analyze barriers to health care for children with asthma.
  - → Identify strategies for overcoming barriers to care.
- Interventions
  - → Specify the criteria for care according to the American Academy of Pediatrics.
  - → List some of the ways that the school nurse can improve resource utilization.
- Exam (optional)
- Forms for Contact Hours (optional)

# Instructions for Use of SNAP

- Each lesson contains study questions, a corresponding reading assignment from the AAAAI Manual and post test review questions (required for contact hours).
- If a hard copy AAAAI manual is not attached to this overview, see the next bullet
- Online Manual Directions:
  - You will need Adobe Acrobat Reader to get the manual. If your computer does not have Adobe Acrobat, you can download and install it for free from this site: <a href="http://www.adobe.com/products/acrobat/readstep.html">http://www.adobe.com/products/acrobat/readstep.html</a>
  - Once you are sure you have Adobe Acrobat, point your browser to:
    - http://www.aaaai.org/professional/initiatives/pediatricasthma.stm
  - Follow on-screen directions to "Click here to download"
  - Read the proprietary notice and click on "I Accept"
  - Follow on-screen directions are for downloading the document to your computer. Each link has only a portion of the manual, so you will need to visit all of the links to receive complete information. If you want to view the document without downloading it, you can simply click on the link and do so.

# Directions to Receive Contact Hours

- If you wish to receive \*contact hours for this independent student (ED II), please follow these instructions carefully:
  - Review each lesson and associated readings from the AAAAI manual. Contact hours will only be given for the entire module and not individual parts of the module.
  - Complete the post test included in this packet at the end of each lesson. Please answer the questions according to the content in the module and not from any other resources that you may have read/reviewed in the past.
  - Complete the corresponding evaluation for the entire module.
  - Complete the participant profile.
  - Mail the post-test, evaluation, participant profile and a check for \$10.00 (payable to Arizona State University) to:

Continuing and Extended Education College of Nursing Arizona State University Box 872602 Tempe, Arizona 85287-2602

It is estimated that it will take 200 minutes to review this Self-Instructional Module, conduct the exercises and complete the post-test. The criteria for successful completion of this course is 80% or higher score on the post test (i.e. contact hours will be awarded if you achieve a score of 80% correct or higher). For completing this activity, you will receive 4.0 contact hours and a certificate of completion in the mail along with your graded post-tests. If you achieved less than 80% on the post-test and wish to receive credit, you must complete another post-test (a new post-test will be mailed to you at the time you receive your results if you failed the post-test). You can resubmit the second post-test with another \$10.00 fee. There is no additional opportunity for contact hours after the second submission.

# Directions to Receive Contact Hours (continued)

- When you take the post test, remember that the questions are based on what is presented. This information may differ from your opinion or from what you already know about the subject. Answer the questions according to the material that is presented. There is only one correct answer.
- If you have any questions about the content of this module, please call 480.965.7431.
- This self-instructional unit (Educational Design II) has been approved for 4.0 contact hours (CEEP# 5311-00).
- The Arizona State University, College of Nursing's, **Continuing and Extended Education Program** is approved as a provider of continuing education in Nursing by the Arizona Nurses Association which is accredited as an approver of continuing education in nursing by the American Nurses Credentialing Center's (ANCC) Commission on Accreditation.

# Lesson 1 & 2

### Topics

- Introduction
- Epidemiology
- Pathogenesis of Asthma in Children
- Natural history of Asthma

## Readings (hard copy)

 Pages i, 2-17 in Pediatric Asthma: Promoting Best Practices Manual (AAAAI)

### Readings (online)

- Read materials found in "<u>Epidemiology</u>" link
- Read materials found in "Pathogenesis of Asthma in Children" link
- Read materials found in "Natural History" link

#### Note:

 Use the lesson objectives to guide you as you read the AAAAI manual as not all the information is relevant for school nurses.

Upon completion of the readings the school nurse will be able to answer the following:

#### Introduction

 What is Asthma and why is it important to school health care providers?.

#### Epidemiology

- What are the characteristics of children with asthma?
- What is the cost in time and resources of Asthma?
- What are the goals or expected outcomes of asthma care?

# Upon completion of the readings the school nurse will be able to answer the following:

#### Pathogenesis

- What is the Inflammation response in childhood asthma?
- What part of the inflammation response usually causes a visit to doctor or emergency room?

#### Natural History

- Who gets asthma?
- Which children develop persistent asthma?
- What precipitates asthma attacks?
- What is the relationship of of allergies to asthma?

# Lesson 1 & 2: Study Questions

#### 1. Asthma in children is:

- a. often misdiagnosed
- b. under treated
- c. treatable
- d. all of the above

# 2. Asthma is the most common chronic disease and affects how many children:

- a. 2 million
- b. 5 million
- c. 9 million
- d. 11 million

#### 3. Asthma is a leading cause of:

- a. school absences
- b. parents missing work
- c. limited physical activity in school children
- d. all of the above

#### 4. Anti-inflammatory treatment for children with URI is helpful in:

- a decreasing airflow
- b. increasing hyperresponsiveness
- c. decreasing morbidity from wheezing
- d. all of the above

# 5. Factors associated with *onset* of asthma symptoms include all but:

- a. male gender
- b. allergies
- c. exercise
- d. prenatal exposure to secondhand smoke

#### 6. Expected outcomes of care of children with asthma are:

- a. mild symptoms; mild activity limitations
- b. moderate symptoms; moderate activity limitations
- c. no symptoms; no activity limitation
- d. no symptoms; mild activity limitations

- Topics
  - Diagnosis
- Readings (hard copy)
  - Pages 20-31 in AAAAI Manual or online
- Readings (online)
  - Read materials found in "Diagnosis" link
- Introductory note:

Although school nurses are not responsible for initial diagnosis of asthma, it is important to recognize signs and symptoms of asthma for referral. Many cases of asthma are undiagnosed because children may not be followed by a medical provider or have not reported symptoms when last seen by a medical provider.

# Upon completion of readings the school nurse will be able to answer the following:

#### Asthma Diagnosis

- How is asthma diagnosed?
- Why is asthma frequently underdiagnosed?
- What conditions may resemble asthma?
- What signs and symptoms suggest the child does not have asthma?
- How can the school nurse contribute to accurate diagnosis of asthma?
- What triggers and irritants make asthma symptoms worse?
- What are the essential elements of the child's asthma history?
- What objective measurement is used for diagnosis of asthma?
- What objective measurement is used for monitoring asthma?

# Lesson 3: Study Questions

- 7. A child may have asthma with repeated diagnoses due to all except:
  - a. pneumonia
  - b. bronchitis
  - c. cystic fibrosis
  - d. bronchiolitis
- 8. All of the following symptoms are related to asthma except:
  - a. chest tightness
  - b. fatigue when playing
  - c. recurrent cough with or without wheezing
  - d. vomiting
- 9. A child who is most likely asthmatic will have symptoms made worst by which of the following:
  - a. viral infections
  - b. exercise
  - c. crying, laughing
  - d. all of the above
- 10. Tabacco smoke is a trigger for asthma and classified as:
  - a. allergen factor
  - b. irritant factor
  - c. infection factor
  - d. endocrine factor
- 11. Cockroaches can be an asthma trigger and are classified as:
  - a. allergen factor
  - b. irritant factor
  - c. environmental change factor
  - d. food additive factor

## Lesson 4 & 5

### Topics

- Managing the Child with Asthma
- Assessment and Monitoring

### Readings (hard copy)

Read pages 36-47 in AAAAI Manual

### Readings (online)

- Read materials found in "Managing the Child with Asthma" link
- Read materials found in the "<u>Assessment and Monitoring</u>" link

#### Note:

- Although the School Nurse is not managing the child with asthma, it is important to know the goals of therapy and signs of uncontrolled asthma for referral.
- There are some terms not defined in this reading. Definitions of these terms are on the attached "Supplementary Definitions".

# Supplementary Definitions

#### SPIROMETRY DEFINITIONS

- Forced Vital Capacity (FVC)
  The volume of gas that can be forcefully expelled from the lungs after maximal inspiration.
- Forced Expiratory Volume in 1 Second (FEV<sub>1</sub>)
  The volume of gas expelled in the first second of the FVC maneuver.
- Forced Expiratory Flow From 25% to 75% of the Forced Vital Capacity (FEF<sub>25-75</sub>)
  The maximal midexpiratory airflow rate.
- Peak Expiratory Flow Rate (PEFR)
  The maximal airflow rate achieved in the FVC maneuver.
- Maximum Voluntary Ventilation (MVV) The maximum volume of gas that can be breathed in 1 minute (usually measured for 15 seconds and multiplied by 4).

#### **LUNG VOLUMES DEFINITIONS**

- Slow Vital Capacity (SVC)
  The volume of gas that can be slowly exhaled after maximal inspiration.
- Total Lung Capacity (TLC) The volume of gas in the lungs after a maximal inspiration.
- Functional Residual Capacity (FRC) The volume of gas in the lungs at the end of a normal tidal expiration.
- Residual Volume (RV) The volume of gas remaining in the lungs after maximal expiration.
- Expiratory Reserve Volume (ERV)
  The volume of gas representing the difference between functional residual capacity and residual volume.

Upon completion of readings the school nurse will be able to answer the following:

- Managing the Child with Asthma
  - What are the components of successful asthma management?
  - What are the goals of therapy for the child with asthma?
  - What are the signs of asthma control in children?
  - Why should children with persistent asthma have two asthma plans?

Upon completion of readings the school nurse will be able to answer the following:

- Assessment and Monitoring
  - Who Should Do PEF Monitoring?
  - How is personal best PEF determined?
  - Why should children with asthma be monitored frequently by their medical provider?
  - What questions about medications are important to ask for the asthma history?

# Lesson 4 & 5: Study Questions

- 12. Successful asthma management has how many components:
  - a. three
  - b. four
  - c. five
  - d. none of the above
- 13. Signs that asthma is not under control include all except:
  - a. coughing
  - b. waking up at night
  - c. normal activities
  - d. difficulty breathing
- 14. Personal best peak flow readings in children are determined by the:
  - a. two best readings for 2 weeks in the morning after medications
  - b. two best readings for 2 weeks in the morning before medications and in the late afternoon after medications
  - c. the average of all daily peak flow readings for 2 weeks; readings can be taken at any time convenient for the child
  - d. cannot be determined in the school-age child
- 15. What percent of personal best is considered a caution or YELLOW zone?
  - a. 80%
  - b. 50-80%
  - c. 30-50%
  - d. <20%

# Lesson 4 & 5: Study Questions

#### 16. A child should be referred for revaluation for the following:

- a. goals of therapy have not been met after 1 month
- b. goals of therapy have not been met after 2 months
- c. goals of therapy have not been met after 3-6 months
- d. goals of therapy have not been met after 9 months

# 17. What percent of personal best is considered <u>medical</u> alert or RED zone:

- a. >80%
- b. 70-80%
- c. 60-70%
- d. <50%

- Topics
  - Controlling Factors Contributing to Severity
- Readings (hard copy)
  - Page 49-53 in AAAI Manual
- Readings (online)
  - Read materials in "Controlling Factors Contributing to Severity" link

Upon completion of readings the school nurse will be able to Answer the following:

- Controlling Factors Contributing to Severity
  - What are the major indoor triggers for asthma?
  - What suggestions can be given to parents of children who are sensitive to weather changes?
  - What conditions exacerbate asthma in children?
  - What other factors can negatively influence asthma severity?

# Lesson 6: Study Questions

- 18. Suggestions for controlling factors that contribute to severity of asthma include all but the following:
  - a. fix leaking faucets
  - b. keep pets out of child's room
  - c. eliminate use of fireplaces
  - d. do not give flu shots
- 19. Asthma <u>exacerbations</u> are most often precipitated in children under five by:
  - a. sinusitis
  - b. gastrointestinal reflux
  - c. viral respiratory infection
  - d. all of the above
- 20. In children over five years of age, asthma is frequently associated with:
  - a. sinusitis
  - b. allergy
  - c. viral respiratory infection
  - d. gastrointestinal reflex
- 21. Severe, even <u>fatal exacerbations</u> of asthma may occur in children who have had reactions to:
  - a. penicillin
  - b. tylenol
  - c. aspirin
  - d. none of the above
- 22. Mold and cockroach triggers can be reduced by indoor humidity to:
  - a. less than 80%
  - b. less than 70%
  - c. less than 60%
  - d. less than 50%

### Topics

- Pharmacologic Part I
- Pharmacologic Part 2

### Readings (hard copy)

Pages 58-100 in AAAAI Manual.

#### Readings (online)

- Read materials in "Pharmacologic Therapy Part 1" link
- Read materials in "Pharmacologic Therapy Part 2" link

#### Notes:

- Although school nurses are not prescribing or modifying medications for children with asthma, it is important to understand the differences in medication categories and their actions.
- Particularly read the differences between longterm and quick-relief medications and their proper use, as many parents and students are not aware of this and may need education.
- Note the goals of therapy and section on "What is asthma control?" as children may need referral if not meeting these goals.

# Upon completion of readings the school nurse will be able to answer the following:

#### ■ Pharmacological Therapy Part 1 & 2:

- What is the difference between long- term and quick-acting medications?
- How can medications be kept at a minimal level?
- What are the goals of therapy?
- What is asthma control in children?
- What are special concerns of adolescent children and asthma treatment?
- What are risk factors for death from asthma?
- What are the normal breathing and pulse rates for children?
- What are primary prevention steps for asthma?
- How can asthma symptoms be controlled for students who are participating in sports and exercise activities?

# Lesson 7: Study Questions

#### 23. Poor control of asthma may be related to:

- a. inhaler technique
- b. adherence
- c. environmental factors
- d. all of the above

#### 24. Signs of distress in a child include all but :

- a. difficulty talking
- b. difficulty lying down
- c. increased respiratory rate
- d. decreased heart rate

#### 25. Normal breath rate for a child 6-8 years is:

- a. <50/minute
- b. <40/minute
- c. <30/minute
- d. <20 minute

#### 26. Exercise induced asthma is caused by :

- a. loss of heat from airways
- b. loss of water from airways
- c. lack of warm up period
- d. all of the above

#### 27. Normal heart rate in a child 6-8 years old is:

- a. <140/minute
- b. <130/minute
- c. <120/minute
- d. <110/minute

- Topics
  - Patient Education
- Readings (hard copy)
  - Pages 102-109 in AAAAI Manual
- Readings (online)
  - Read material in "Patient Education" link

#### Note:

- Although this chapter addresses the relationship and education opportunities between the Primary Medical Provider and patient, many of the suggestions can be adapted to the school health encounter.
- Especially note the recommended methods of teaching children of different ages.

Upon completion of readings the school nurse will be able to answer the following:

#### Patient Education:

- How can you form a partnership with the child and family?
- What can be done in a short encounter for patient teaching?
- What is the recommended format for giving information?
- What is the average attention span for school aged children?
- Why is working with teenagers more challenging?
- How does one converse with child or parents interactively?

# Lesson 8: Study Questions

- 28. Effective asthma education programs to child and parent have all of the components <u>except</u>:
  - a. begins at time of diagnosis
  - b. tailored to meet the needs of child and family
  - c. provides verbal action plans
  - d. is sensitive to cultural beliefs and practices
- 29. Teens can be challenging to teach. All of the following statements are true except for:
  - teens view treatment as infringing on their independence
  - b. teens respond best to peers as teachers or teen idols
  - c. teens recognize the dangers of poorly controlled asthma
  - d. teens do well in teen support groups
- 30. All of the following is accurate information about asthma except:
  - a. medication for asthma is addictive
  - b. medication for asthma remains effective for long term use
  - c. prescription medications should be used to treat asthma not over the counter medicines
  - d. asthma is a physical disease not an emotional illness

- Topics
  - Asthma and the School Child
- Readings (hard copy)
  - Pages 114-121 in AAAAI Manual
- Readings (online)
  - Read materials in "<u>Asthma and the School Child</u>" link
- Additional Readings in this module:
  - Rules of Two<sup>TM</sup>
  - Communicating with the Physician Letter
  - Parent Consent Form

#### Note:

- This section was especially written for school care of asthma. Additional information from the Arizona Asthma Coalition follows which includes a letter to use when communicating with physicians.
- Remember that this would only be sent if you notice a child has lack of control of symptoms after 3-6 months, and after consulting with parents for permission.
- Also note that the Rules of Two<sup>™</sup> does not apply when using an asthma inhaler before exercising as this is a treatment to control an asthma trigger.

Upon completion of readings the school nurse will be able to answer the following:

- Asthma and the School Child
  - Why should every school have a school nurse or access to a nurse?
  - What are common triggers in the school environment?
  - What do school personnel need to know?
  - What are common school problems faced by the student with asthma?
  - How asthma Friendly is your school?
  - What are the essential components of the School Asthma Management Plan?
  - When should children be referred using the Rules of Two<sup>TM</sup>?

# **Rules of Two**<sup>TM</sup>

When you need more than just rescue medication for Asthma, "Rules of Two<sup>TM</sup>" can help!

# Ask your patients these questions:

Do you take your "quick- relief inhaler" more than

# TWO TIMES A WEEK?

Do you awaken at night with asthma more than

# TWO TIMES A MONTH?

Do you fill your "quick-relief inhaler" more than

# TWO TIMES A YEAR?

If you can answer "yes" to any of these questions, ask your doctor or pharmacist about a

LONG-TERM CONTROLLER
ANTI-INFLAMMATORY MEDICATION

# Asthma Can Be Controlled. Expect Nothing Less.

### Dear Colleague:

As the Chairperson for the Arizona Asthma Coalition (AAC) I would like to inform you of an exciting new program to help you in managing patients with asthma. The Arizona Asthma Coalition has developed and distributed a School Nurse Asthma Program (*SNAP*) kit to every school district in Arizona. The *SNAP* kit teaches school nurses the critical elements needed to manage a child's asthma at school.

The kit contains a curriculum that includes the American Academy of Allergy Asthma and Immunology's <u>Guide for Managing Asthma in Children</u>, the National Heart, Lung, Blood Institute's <u>Guidelines for the Diagnosis and Management of Asthma</u> and the **Rules of Two.**<sup>TM</sup> It also provides the school nurse with the opportunity to receive contact hours from the Arizona State University College of Nursing by mail or over the Internet.

**SNAP!** was designed to provide the nurse with knowledge which can be applied through nursing assessment of the child's condition and application of asthma control skills. Sharing this information with you is encouraged. We hope you will join us in supporting school nurses by responding to requests in a timely manner. School nurses often operate with few resources so donations of demonstration inhalers or other items such as peak flow meters will help them assist you in educating your patients appropriately.

We believe that this safety net will assist Arizona in improving its unacceptable asthma mortality/morbidity rates for children with asthma.

For questions or input about our SNAP! Kits please contact myself or our director, Bobbie O'Neil at (623) 572-9187.

Sincerely,

Bill Morgan, MD Chairperson, AAC

# School Nurse Asthma Program (SNAP!) Report

		Date:
Dear Doctor:		
induced asthmatic.  ◆ NHLBI Goals for Asthm	according to the following:  appliance with the <b>Rules of Two<sup>TM</sup></b> and  a Therapy are not being met.  a action plan on file at the school nurse's appropriate:	l is not an exercise-
Please direct your input and orders to:		
<u>Phone:</u> <u>Fax:</u>		
Sincerely,		
School Nurse		
	Parental Release	
I, the parent ofphysician caring for my child.	consent to release of the information in	ndicated above to the
Signature		
Printed Name		38

Date

# Lesson 9: Study Questions

- 31. Common asthma triggers in the school include:
  - a. dust mites
  - b. animals
  - c. chalk dust
  - d. all of the above
- 32. Common nonallergic triggers of asthma include:
  - a. cockroaches
  - b. dust mites
  - c. mold spores
  - d. weather changes
- 33. School personnel such as teachers and coaches need to know:
  - a. early warning signs of asthma episodes
  - b. how to treat an asthma episode
  - c. what medications the child uses
  - d. all of the above
- 34. Common school problems faced by the student with asthma include all but:
  - a. high absenteeism
  - avoidance of going to school nurse office for medication
  - c. side effects of medication decreasing school performance
  - d. doing too much exercise

# Lesson 10

- Topics
  - Barriers to Care and Recommendations for Policy
- Readings (hard copy)
  - 126-137 in AAAAI Manual
- Readings (online)
  - Read materials in "<u>Barriers to Care and</u> <u>Recommendations for Policy</u>" link
  - Read materials in "Interventions" link

# Lesson 10

Upon completion of readings the school nurse will be able to answer the following:

- Barriers to Care and Recommendations for Policy:
  - What barriers to health care can affect children with asthma?
  - What are barriers from within the healthcare system?
  - What can be done to overcome barriers to care?

# Interventions:

- According to the American Academy of Pediatrics, what are the criteria for care?
- What are the important outcomes to measure when considering interventions for children with asthma?
- How can our health care system better serve children with asthma?
- What are some of the ways to improve resource utilization?
- What can YOU do?

# Lesson 10: Study Questions

# 35. Barriers to health care that affect children with asthma include:

- a. poverty
- b. multiple caregivers
- c. lack of school nurses
- d. all of the above

# 36. Which is a barrier within the healthcare system:

- a. lack of community resources
- b. lack of resources for environmental control
- c. deductibles and copayments
- d. single-parent family

### 37. What can be done to overcome barriers?

- a. working with community resources
- b. use of appropriate educational materials
- c. hiring school health personnel
- d. all of the above

# 38. All but one is a recommended suggestion for resource utilization:

- a. allocate funds for education
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- c. provide physicians in every school
- d. educate school administrators about environmental prevention of asthma irritants and triggers.

# **Post Test**

Complete this test and follow instructions on page 10 for obtaining contact hours. Select the one best answer.

- 1. Asthma in children is:
  - a. often misdiagnosed
  - b. under treated
  - c. treatable
  - d. all of the above
- 2. Asthma is the most common chronic disease and affects how many children:
  - a. 2 million
  - b. 5 million
  - c. 9 million
  - d. 11 million
- 3. Asthma is a leading cause of:
  - a. school absences
  - b. parents missing work
  - c. limited physical activity in school children
  - d. all of the above
- 4. Anti-inflammatory treatment for children with URI is helpful in:
  - a decreasing airflow
  - b. increasing hyperresponsiveness
  - c. decreasing morbidity from wheezing
  - d. all of the above
- 5. Factors associated with *onset* of asthma symptoms include all but:
  - a. male gender
  - b. allergies
  - c. exercise
  - d. prenatal exposure to secondhand smoke
- 6. Expected outcomes of care of children with asthma are:
  - a. mild symptoms; mild activity limitations
  - b. moderate symptoms; moderate activity limitations
  - c. no symptoms; no activity limitation
  - d. no symptoms; mild activity limitations

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- a. pneumonia
- b. bronchitis
- c. cystic fibrosis
- d. bronchiolitis

# 8. All of the following symptoms are related to asthma except:

- a. chest-tightness
- b. fatigue when playing
- c. recurrent cough with or without wheezing
- d. vomiting

# 9. A child who is most likely asthmatic will have symptoms made worst by which of the following:

- a. viral infections
- b. exercise
- c. crying, laughing
- d. all of the above

# 10. Tabacco smoke is a trigger for asthma and classified as:

- a. allergen factor
- b. irritant factor
- c. infection factor
- d. endocrine factor

# 11. Cockroaches can be an asthma trigger and are classified as:

- a. allergen factor
- b. irritant factor
- c. environmental change factor
- d. food additive factor

# 12. Successful asthma management has how many components:

- a. three
- b. four
- c. five
- d. none of the above

# 13. Signs that asthma is not under control include all except:

- a. coughing
- b. waking up at night
- c. normal activities
- d. difficulty breathing

# 14. Personal best peak flow readings in children are determined by the:

- a. two best readings for 2 weeks in the morning after medications
- b. two best readings for 2 weeks in the morning before medications and in the late afternoon after medications
- c. the average of all daily peak flow readings for 2 weeks; readings can be taken at any time convenient for the child
- d. cannot be determined in the school-age child

# 15. What percent of personal best is considered a caution or YELLOW zone?

- a. 80%
- b. 50-80%
- c. 30-50%
- d. <20%

# 16. A child should be referred for revaluation for the following:

- a. goals of therapy have not been met after 1 months
- b. goals of therapy have not been met after 2 months
- c. goals of therapy have not been met after 3-6 months
- d. goals of therapy have not been met after 9 months

# 17. What percent of personal best is considered <u>medical</u> alert or RED zone:

- a. >80%
- b. 70-80%
- c. 60-70%
- d. <50%

# 18. Suggestions for controlling factors that contribute to <u>severity</u> of asthma include all but the following:

- a. fix leaking faucets
- b. keep pets out of child's room
- c. eliminate use of fireplaces
- d. do not give flu shots

# 19. Asthma <u>exacerbations</u> are most often precipitated in children under five by:

- a. sinusitis
- b. gastrointestinal reflux
- c. viral respiratory infection
- d. all of the above

# 20. In children over five years of age, asthma is frequently associated with:

- a. sinusitis
- b. allergy
- c. viral respiratory infection
- d. gastrointestinal reflex

# 21. Severe, even <u>fatal exacerbations</u> of asthma may occur in children who have had reactions to:

- a. penicillin
- b. tylenol
- c. aspirin
- d. none of the above

# 22. Mold and cockroach triggers can be reduced by indoor humidity to:

- a. less than 80%
- b. less than 70%
- c. less than 60%
- d. less than 50%

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# 23. Poor control of asthma may be related to:

- a. inhaler technique
- b. adherence
- c. environmental factors
- d. all of the above

# 24. Signs of distress in a child include all but :

- a. difficulty talking
- b. difficulty lying down
- c. increased respiratory rate
- d. decreased heart rate

# 25. Normal breath rate for a child 6-8 years is:

- a. <50/minute
- b. <40/minute
- c. <30/minute
- d. <20 minute

# 26. Exercise induced asthma is caused by :

- a. loss of heat from airways
- b. loss of water from airways
- c. lack of warm up period
- d. all of the above

# 27. Normal heart rate in a child 6-8 years old is:

- a. <140/minute
- b. <130/minute
- c. <120/minute
- d. <110/minute

# 28. Effective asthma education programs to child and parent have all of the components <u>excep</u>t:

- a. begins at time of diagnosis
- b. tailored to meet the needs of child and family
- c. provides verbal action plans
- d. is sensitive to cultural beliefs and practices

# 29. Teens can be challenging to teach. All of the following statements are true except for:

- a. teens view treatment as infringing on their independence
- b. teens respond best to peers as teachers orteen idols
- c. teens recognize the dangers of poorly controlled asthma
- d. teens do well in teen support groups

# 30. All of the following is accurate information about asthma except:

- a. medication for asthma is addictive
- b. medication for asthma remains effective for long term use
- c. prescription medications should be used to treat asthma not over the counter medicines
- d. asthma is a physical disease not an emotional illness

# 31. Common asthma triggers in the school include:

- a. dust mites
- b. animals
- c. chalk dust
- d. all of the above

# 32. Common nonallergic triggers of asthma include:

- a. cockroaches
- b. dust mites
- c. mold spores
- d. weather changes

# 33. School personnel such as teachers and coaches need to know:

- a. early warning signs of asthma episodes
- b. how to treat an asthma episode
- c. what medications the child uses
- d. all of the above

# 34. Common school problems faced by the student with asthma include all but:

- a. high absenteeism
- b. avoidance of going to school nurse office for medication
- c. side effects of medication decreasing school performance
- d. doing too much exercise

# 35. Barriers to health care that affect children with asthma include:

- a. poverty
- b. multiple caregivers
- c. lack of school nurses
- d. all of the above

# 36. Which is a barrier within the healthcare system:

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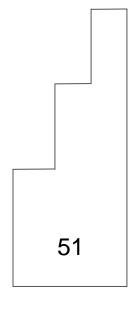
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# Participant Profile

Click here to display the participant profile.



# Course Evaluation

Click here to display the course evaluation.

# Resources

- Resources from Arizona Asthma Coalition
- Educational Resources Programs
- Asthma WEB Links

# Arizona Asthma Coalition Asthma Resource Directory

### **Arizona Asthma Coalition**

Address: P.O. Box 12038, Glendale, AZ 85218

Phone: (480) 995-1885 Fax: (480) 483-6728 Contact: Bobbie O'Neil ULR: www.azasthma.org

Programs: Advocacy, Awareness

## **American Lung Association of Arizona**

Address: 2819 E. Broadway, Tucson, AZ 85716

Phone:(520) 323-1812 Contact:Jennifer Jones

Programs:Camp Not-A-Wheeze Open Airways for Schools

# **Hospital Programs**

### Allergy & Immunization Clinic, Luke AFB

Address:7219 N. Litchfield Road, Luke AFB, AZ 85309

Phone:(623) 856-7523 Fax:(623) 856-4056 Contact:David Summers

Programs: Airforce Asthma Clinic

### Mayo Clinic, Scottsdale

Address:13400 E. Shea Blvd., Scottsdale, AZ 85259

Phone:(480) 301-8227 Fax:(480) 301-7558 Contact:John Lewis

Programs: Asthma Classes

### Allergy Associates Lab, Ltd.

Address:1006 E. Guadalupe Road, Tempe, AZ 85282

Phone: (480) 838-4296 Fax: (480) 820-1275

Contact:Suresh Anand, MD

Programs: Taking Control of Your Asthma

# **Asthma Care Alliance of Southern Arizona (ACASA)**

Address:5956 E. 4th Street, Tucson, AZ 85711

Phone:(520) 745-2791 Fax:(520) 745-5234

Contact: Uwe Manthei, MD

Programs: Open Airways for Schools

Asthma Advocacy

### **University Medical Center**

Address:1501 N. Campbell Avenue, Tucson, AZ 85724

Phone:(520) 694-2475 Fax:(520) 694-2618 Contact:Jeanne Fenn

Programs:Inpatient Asthma Education

# **Arizona Asthma and Allergy Institute**

Address:5310 W. Thunderbird Road, Ste. 200, Glendale, AZ 85306

Phone:(602) 843-2991 Fax:(602) 978-1226

Contact:Ronald Jorgensen, MD

Bill Morgan, MD Roxanne Ipesfone

Programs:In office education

AIR

# **Managed Care Organizations**

### **Arizona IPA**

Address:3141 N. Third Avenue, Phoenix, AZ 85008

Phone:(602) 664-5047 Fax:(602) 264-0597 Contact:Debbie Clay

Programs: Asthma Education

# Cigna Healthcare of Arizona

Address:2302 N. 75th Avenue, Phoenix, AZ 85035

Phone:(623) 849-7554

Fax:

Contact:Bob Hurwitz, MD Programs:Well Aware

### Intergroup of Arizona, Inc.

Address: 2800 N. 44th Street, Ste. 900, Phoenix, AZ 85008

Phone:1-800-977-7485 Fax:(602) 381-3417

Contact:Jennifer Leischow, MPH

Dianne Contreras, MS

Programs: AsthmaWise® Education and Management Program for Children and Adults

### **Aetna US Healthcare**

Address:7878 N. 16<sup>th</sup> Street, Ste. 300, Phoenix, AZ 85020

Phone:(602) 395-8863 Fax:(602) 395-8813 Contact:Linda Wilson

Programs: Asthma Healthy Outlook Disease Management Program

### **Health Choice Arizona**

Address:1600 W. Broadway, #260, Tempe, AZ 85282

Phone: (480) 303-4411 Fax: (480) 731-9557

Contact:Oilleen Walker-Williams

Programs: Asthma Self-Management Program for Children and Adults

### **Mercy Care Plan**

Address: 2800 N. Central Avenue, #400, Phoenix, AZ 85004

Phone:(602) 798-2502 Fax:(602) 263-3022

Contact: Valerie Lauerman, vlauerman@schn.net

Programs: Asthma Disease Management for Children and Adults

### **Phoenix Health Plan**

Address: 2700 N. 3rd Street, Ste. 3000, Phoenix, AZ 85004

Phone:(602) 824-3799 Fax:(602) 824-3794 Contact:Cheryl Figgs

Programs: Pediatric Asthma Education

# **School Health Programs**

# Arizona State University ASU - College of Nursing

Address: P.O. Box 872602 Tempe, AZ 85287

Phone: (480) 965-7576 Fax: (480) 965-0212

Contact:Evelyn Cesarotti, e.cesarotti@asu.edu

Programs: ASU Research Grant for Children with Asthma

### **Altar Valley School District**

Address: HCR #1 Box 130, Tucson, AZ 85736

Phone:(520) 822-1030 Fax:(520) 822-1798 Contact:Laurie Buckelew

Programs: Open Airways at Mary Dill Elementary School

# **Camp Verde Unified School District**

Address: P.O. Box 728, Camp Verde, AZ

Phone:(520) 567-6432 Fax:(520) 567-2951

Contact:Patricia Kaminsky

Programs: Asthma Information for Children and their Parents

# **Asthma Education Programs**

### **Asthma Care Training for Kids (ACT)**

Asthma and Allergy Foundation of America, 1-800-7-ASTHMA

A three-session asthma education program for children ages 7-12 and their parents. The program's key messages are conveyed using traffic analogies. The central theme is that children can learn to manage their asthma by getting into the "driver's seat" and taking charge.

### **Asthma Awareness Curriculum for the Elementary Classroom**

National Heart, Lung and Blood Institute Information Center, 301-251-1222

The goal of this curriculum is to help students understand, accept, and, when appropriate, help their classmates with asthma. The curriculum contains two 30-rninute lessons for children in grades K-3 and two for children in grades 4-6.

### Managing Asthma: A Guide for Schools

National Heart, Lung and Blood Institute Information Center, 301-251-1222

This program is designed to provide school personnel with the necessary information to begin an asthma management program. It contains basic guidelines that are presented through action steps for specific members of the school staff, including principals, teachers, coaches, guidance counselors, and school nurses.

### **Open Airways**

Contact your local American Lung Association chapter

A program for elementary schoolchildren ages 8-11. Participants meet in six 40-minute sessions during the school day, apart from their class. The curriculum incorporates an interactive teaching approach utilizing group discussion, stories, games and role play.

### **SAY: Support for Asthmatic Youth**

Asthma and Allergy Foundation of America, Renee Theodorakis, 516-625-5735

SAY programs give pre-teens and teens a chance to talk to each other about what it's like to have asthma and allergies. Program sessions feature guest speakers, games, food and other fun activities. Meetings are led by caring professionals, peers and by individuals who have achieved their goals in spite of their asthma and allergies.

### You Can Control Asthma

Asthma and Allergy Foundation of America, 1-800-7-ASTHMA

The only true low-literacy asthma education program for children ages 6-12 and their families. Every word and picture of this 1995 revised, multi-cultural edition has been pre tested to ensure comprehension and appropriateness.

# Resources

There are a number of organizations that can provide information and advice about educational issues and the rights of students with asthma. They include:

### •Healthy Kids: The Key to Basics (617-965-9637)

Promotes health and educational equity for students with asthma and other chronic health conditions. Consulting to families, schools, health professionals and organizations.

## •U.S. Environmental Protection Agency (1-800-438-4318)

Indoor Air Information Clearinghouse

Produces materials to help schools address environmental management.

### •U.S. Department of Education Office for Civil Rights (202-205-9667)

Provides counsel, information and literature about the educational rights of children.

### •Federation for Children with Special Needs (617-482-2915)

Information and local referrals for parents of children with health needs.

### •National Information Center for Children and Youth with Disabilities (1-800-695-0285)

Clearinghouse for information on disabilities and related issues.

### •National Education Association (202-833-4000)

Educational professionals' union that produces health curriculums and information on school environmental issues.

### •National School Boards Association (703-838-6722)

Provides school boards with policy statements on educational issues including health and safety.

### •National Parent Teacher Association (312-670-6782)

A resource for parents providing resolutions and policy statements regarding safety, health and other educational issues.

Organizations that provide information about asthma and asthma education include:

- Asthma and Allergy Foundation of America 1-800-7-ASTHMA
- The National Asthma Education and Prevention Program 301-251-1222
- American Academy of Allergy, Asthma and Immunology 1-800-822-2762
- American College of Allergy, Asthma & Immunology 1-800-842-7777
- American Lung Association (contact your local Lung Association)
- National Jewish Ctr. for Immunology and Respiratory Medicine 1-800-222-LUNG
- Allergy and Asthma Network/Mothers of Asthmatics 1-800-878-4403
- The Food Allergy Network 1-800-929-4040
- Consortium on Children's Asthma Camps 612-871-7332

(contacts- Penny Fena or Katy McBride)

# **Asthma WEB Links**

- American Academy of Allergy Asthma & Immunology (AAAAI) http://www.aaaai.org/
- Allergy and Asthma Network: Mothers of Asthmatics, Inc. <a href="http://www.podi.com/health/aanma/">http://www.podi.com/health/aanma/</a>
- Asthma and Allergy Foundation of America http://www.aafa.org/
- Asthma: American Lung Association http://www.lungusa.org/asthma/index.html
- Free Asthma Medication for Low Income Families http://www.ashp.org/public/news/breaking/asthma.html
- Glaxo Wellcome, USA http://www.asthmacontrol.com/
- JAMA Asthma Information Center http://www.ama-assn.org/special/asthma/asthma.htm
- Mayo Clinic Allergy & Asthma Center http://www.mayohealth.org/mayo/common/htm/allergy.htm
- National Heart, Lung, and Blood Institute (NHLBI) http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm
- People with Asthma Should Get Annual Flu Shot http://www.ktv-l.com/news/nn02 02 98.html
- Wee Willie Wheezie Asthma Education Site http://www.newcomm.net/ies/

# **Handouts**

- Educational Handouts for General information on Asthma.
- Pamphlets for children and parentsavailable from American Lung Association.
- Information for parents from Mothers of Asthmatics
- Information for School Personnel
- Education videos
- Note:
  - These handouts and videos are available in the SNAP kit that has been sent to each school district. The kit contains examples of teaching materials that may be reproduced or used for teaching.
  - SNAP kits are also available for LOAN from American Lung Association.